

REMARKS

Acknowledgement and entry of Applicants' previous amendments by the Examiner is gratefully noted. The withdrawal of the objection to claim 15 and the 112, second paragraph rejection of claim 20 by the Examiner is also noted.

Patentability of the Claims Over the Cited References

Claims 14, 15, 17-24, 26, 29, and 31-33 have been rejected under 35 U.S.C. § 102(b) as being anticipated by the reference United States Patent No. 6,060,256 issued to Everhart et al. Claims 14, 15, 30, 31 and 32 have been rejected under 35 U.S.C. § 102(b) as being anticipated by the reference United States Patent No. 5,512,131 issued to Kumar et al. Reconsideration of the grounds for the anticipation rejections under 35 U.S.C. § 102(b) in view of these two references is respectfully solicited for the following reasons.

First, the Examiner's attention is directed to page 4, lines 5 to 10 of Applicants' specification where both references are referred to in the Background in which the relevance of both in respect of their teachings of laying down a pattern of receptors on a surface.

With specific reference to Everhart et al. (Everhart) the Examiner has taken the position on page 3, first paragraph of the Report that Everhart discloses all the subject matter of claim 14. Particularly, it is stated in the first sentence that "Everhart et al. teach a method ...and on the surface a first pre-selected pattern of a first analyte specific pattern and at least a second pre-selected pattern of a second analyte-specific receptor (column 8, lines 25-30). Applicants' claim 14 recites:

"...providing a substrate including a surface and on the surface a first pre-selected pattern of a first analyte-specific receptor and at least a second pre-

*selected pattern of a second analyte-specific receptor, **wherein each pre-selected pattern gives rise to a pre-selected diffraction pattern distinct from all other diffraction patterns;***

The discussion referred to by the Examiner in column 8, lines 25-30 are illustrated in Figure 2. As can be clearly seen in Figure 2, Everhart discloses “a strip 50 is provided with several micro-contact printed metalized films 70, 75, 80, and 85, **each film having a monolayer pattern 60 printed thereon.**”

Thus, in Everhart the **same pattern 60** is sequentially laid out on the different portions of the substrate 70, 75, 80, and 85. Everhart does not include the limitation of Applicants’ claim 1 highlighted above, namely:

“wherein each pre-selected pattern gives rise to a pre-selected diffraction pattern distinct from all other diffraction patterns;”

Applicants respectfully submit this feature is not found in Everhart but instead Everhart relies upon using the same pattern located at different places sequentially along the dipstick. Thus Everhart looks for a diffraction pattern (the same one) caused by different analytes binding to the same pattern but different analyte-specific receptors.

Thus, the method of analysis is different is well since in Applicants claim 14 they recite

*“... and detecting, at a position spaced from the substrate surface, an image of diffracted light from the substrate surface and analysing the image of diffracted light for presence of one or more of the **pre-selected diffraction patterns representative of binding of one or more analytes to their associated pre-selected pattern of analyte-specific receptors**”.*

Thus in Applicants’ method they analyse a single diffraction image to detect the presence of the distinctive diffraction patterns contained therein (arising if more than one analyte is present which bind to different receptors **in**

different patterns), while Everhart looks for the same diffraction pattern corresponding to a single diffraction pattern one after the other. Thus Applicants' method is quite different from Everhart's method and Applicants respectfully submit that their method as recited in claim 1 is not found in Everhart.

With respect to Kumar et al. (Kumar), it is directed to a method of stamping a pattern onto a surface using an elastomeric stamp coated with a self-assembling monolayer forming species having a functional group attached thereto for binding particular materials. The Examiner has referred to column 2, line 3-20, column 3, lines 21-30, column 11, lines 64 to column 12, line 9, and columns 16, lines 26-30 as referring to features which disclose the subject matter of claim 14. Applicants have carefully reviewed these sections in addition to the entirety of Kumar and respectfully submit that nowhere in this reference is there a teaching of the subject matter of claim 14. Particularly, the feature of claim 1:

*providing a substrate including a surface and on the surface a first pre-selected pattern of a first analyte-specific receptor and at least a second pre-selected pattern of a second analyte-specific receptor, **wherein each pre-selected pattern gives rise to a pre-selected diffraction pattern distinct from all other diffraction patterns;***" is simply not disclosed in Kumar. Further, the only apparent reference to diffraction patterns in Kumar is at column 16, lines 26 to 30. Applicants respectfully submit that this disclosure of Kumar does not teach Applicants' method of analyzing a diffraction image as set out in claim 14:

*and detecting, at a position spaced from the substrate surface, an image of diffracted light from the substrate surface and analysing the image of diffracted light for presence of one or more of the **pre-selected diffraction patterns representative of binding of one or more analytes to their associated pre-selected pattern of analyte-specific receptors***".

The Examiner has rejected claim 16 under 35 U.S.C 103(a) as being unpatentable over Everhart et al. in view of Yguerabide et al. (U.S. Patent No. 6,586,193), claim 25 has been rejected under 35 U.S.C 103(a) as being unpatentable over Everhart et al. in view of Sandstrom et al. (U.S. Patent No.5,494,829), claims 27 and 66 has been rejected under 35 U.S.C 103(a) as being unpatentable over Everhart et al. in view of Kumar et al. (U.S. Patent No.5,512,131).

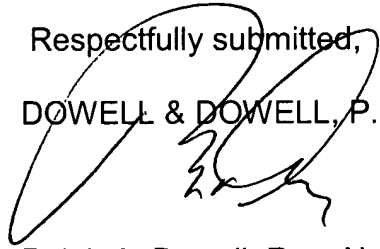
Applicants respectfully submit that since the subject matter of claim 14 is not anticipated by either Everhart or Kumar the cited combinations of Everhart with Yguerabide, Sandstrom and Bouma and the combinations of Kumar with Yguerabide, Sandstrom and Bouma still does not in any way teach or suggest the subject matter of claims 16, 25, 27, 28 and 66.

In view of these quite distinct differences, Applicants respectfully submit the subject matter of claims 14 to 33 and 66 are not disclosed in either Everhart or Kumar and certainly those of ordinary skill in the art upon reading these references would not be led to the subject matter of these claims.

In view of the foregoing, reconsideration and withdrawal of the rejection of claims 14-33 and 66 is respectfully solicited and favorable consideration and allowance of claims 14-33 and 16 is requested.

Should the Examiner have any questions regarding the allowability of the claims with respect to the art, it would be appreciated if the Examiner would contact the undersigned attorney-of-record at the telephone number shown below for further expediting the prosecution of the application.

Respectfully submitted,
DOWELL & DOWELL, P. C.

A handwritten signature in black ink, appearing to be 'R. A. Dowell', is written over the text 'DOWELL & DOWELL, P. C.'.

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